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JANUARY
1952

NUMBER 26

MGA

BULLETIN

ORGAN OF THE MUSHROOM GROWERS' ASSOCIATION

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JANUARY 1952

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No responsibility can be accepted by the Editor, the Editorial Board, or the Mushroom Growers' Association, for statements made or views expressed in this Bulletin, or for any advertisements included in this publication.

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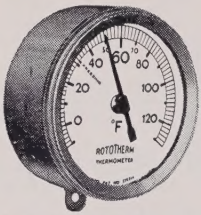

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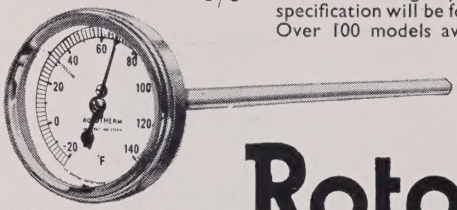

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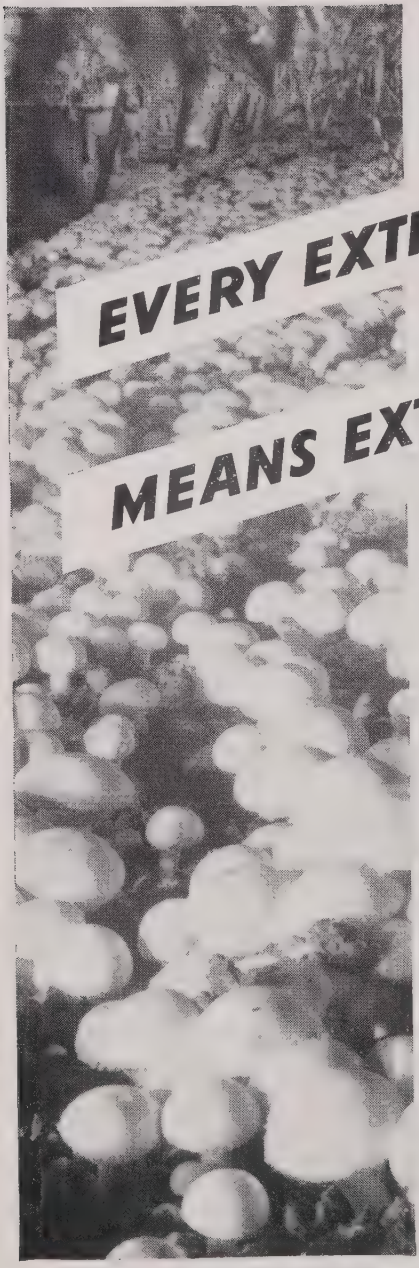

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EDITORIAL

IT'S UP TO YOU

The thought in the back of all minds at the Annual Meeting was this : We must have more members. Were you at the Criterion ? In case you were not, may I repeat our new Chairman's plea to all who have an idea as to how membership might be increased to tell us, so that the Executive Committee can consider it ?

Perhaps this Committee is not fully representative of the smaller growers, those who can spare neither the time nor the expense of a day in London and therefore lose the opportunity of voting. I know of such cases, and at Yaxley we are considering methods of postal voting which I intend to bring before the next Executive Committee Meeting.

Perhaps growers who have never been visited by officers of the M.G.A. feel we are not interested in them personally. Indeed, I heard of a member in October who was disinclined to renew his subscription because no-one from Yaxley had been to see him during his three years' membership.

One of the motives underlying my advocacy of Area Meetings last year was the possibility it provided of visits by our Secretary to growers in many different parts of the country while he was in their neighbourhood attending those meetings. But my wishes in this respect were over-ruled on grounds of economy, for they entailed the engagement of clerical assistance for Mr. Watson, which we simply could not afford. Yet, how can our Secretary visit members unless (*a*) he is freed from his daily office routine, and (*b*) his extra travelling and subsistence expenses can be met ?

General Sir Oliver Leese suggested in 1950 that a mobile technical adviser be appointed by the N.A.A.S. to specialise exclusively on mushrooms, but the Ministry could not consider such a precedent. Whereupon one member told me he would gladly double his subscription if it meant that in trouble he could telephone an expert to call on him.

I am a warm supporter of the N.A.A.S. and have many friends among its personnel, but I would not go so far as to suggest that, because the N.A.A.S. cannot provide us with a specialist adviser, we should give up all hope of one if we really need one.

Would YOU be prepared to double your subscription if it entitled you to summon the aid of such an adviser, one who would call on you at your place and discuss your troubles on the spot ?

If all members said Yes, we could of course look out for such a man at once. But it is not for me to suggest such an extension of our activities is practicable or desirable ; I mention it only in the hope that it will stimulate thought for the future.

I am aware there are some members who deplore even our present efforts to give cultural advice, and they would say No ! There are others who say we have enough calls on our purse as things are. What the Chairman appeals for is **your** views on how the M.G.A. can be of greater use to you.

FRED. C. ATKINS.

PROGRESS RECORDING

by FRED. C. ATKINS

Since the War I have visited a great many mushroom farms and have been privileged to examine hundreds of crops. My conclusion is that while most of us keep records of sorts few go into sufficient detail to provide data of real value later on. Figures collected over a period of five years can be enlightening when averaged and digested.

It was interesting to read McGregor Bulloch's emphasis in Bulletin 24 on the need for records of every circumstance which might influence the ultimate yield of a house. I have seen the truly remarkable records kept at Blandford; they are second in detail only to the M.R.A.'s statistics covering more than 100 pages for each crop.

I used to think my own records were sufficient, and even now I would hesitate to weigh separately each day the yield from each and every shelf, as Bulloch does. But I support his contention that figures *in as much detail as is practicable* are well worth the time spent on them.

And here, for once, I am in full accord with Stanley Middlebrook —though I hesitate to confess it, lest it persuade our perverse Diarist to scrap records altogether—which would be a calamity to him and to the Industry (for they form the basis of his significant research with Dr. Storey on ventilation).

Middlebrook's notes are comprehensive but not submerged by detail, and I am glad to be able to reveal that he is to write us an article shortly on Crop Recording Methods.

Until he gets down to it, I felt it might perhaps be interesting if I were to describe a Progress Chart I introduced several years ago to my Yaxley office which has proved particularly helpful. This chart does not record for future reference, but tells you what is happening NOW. It reveals current progress and highlights errors in managerial timing and crop discrepancies.

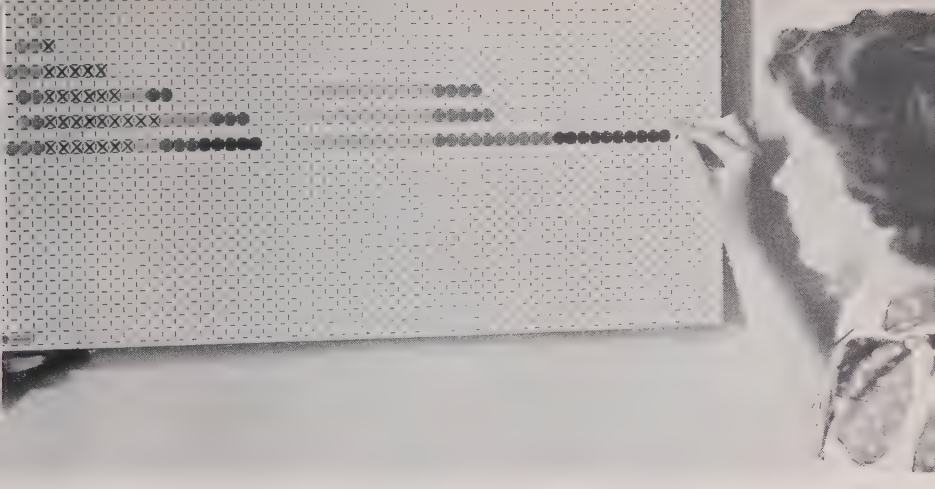
The Graphdex wall panel illustrated was supplied by Remington-Rand Ltd., of Commonwealth House, New Oxford Street, London. It would have been better had the photograph been in colour, for a black-and-white reproduction does not do justice to the vivid "signals" which indicate to the grower at a glance how things are going on the farm.

It is difficult to explain without colour what is revealed by the picture, but I will do my best. Let us take the six lines in order, from 1 to 6, top to bottom.

LINE 1: One brown signal is clipped in to indicate the house has been emptied within the past week.

LINE 2: Two brown signals indicate the house was empty for two weeks between finishing one crop and filling with fresh compost. The next (crossed) signal shows the house was filled a week ago.

LINE 3: Three brown signals mean the house was empty three weeks (which is wasteful). Five



crossed signals tell you it was filled five weeks ago.

LINE 4 : Two brown signals means two weeks between emptying and filling. Six crossed signals reveal that the house took six weeks from filling to come into crop. Two pink signals show you it took two weeks to produce its first pound to the square foot. Two green signals indicate that for the past two weeks it has been producing some of its second pound to the square foot.

" Some ? But how much ?" you may ask. To explain we must switch our attention to the right-hand side of the chart. Each square on the *left* indicates one week ; each square on the *right* represents 100 lb., or one-tenth of a pound per sq. ft. in a 1,000 sq. ft. house. Ten pink signals indicate the completion of the first pound per sq. ft. The next four green signals show that the yield is 1.4 lb. The time taken is four weeks (see left hand side, with its two pink and two green " weeks ").

LINE 5 : Two brown weeks empty, nine crossed weeks between filling and coming into crop (too long), four pink weeks to reach first lb./sq. ft., three green weeks to pick next half pound. Yield at a glance is 1.5 lb. in seven weeks.

LINE 6 : Three brown weeks empty (too long), seven crossed weeks coming into crop, two pink weeks getting its first pound, three green weeks getting its second pound, and five red weeks getting its third pound. The young lady inserting the O signal tells you the house has just been emptied after doing 3 lb./sq. ft. in 10 weeks.

I am afraid the foregoing quite inadequately illustrates the useful at-a-glance information which this Graphdex panel supplies. But I confess I would now feel lost without it. I have adapted it to my way of recording a crop's progress, but there are numerous variants on the theme. Originally, I believe, the system was designed for " progress chasing " in engineering workshops, but it has value in many fields. Particularly helpful, I am sure, would it be to Tray System growers, to whom adherence to a tight schedule is of paramount importance.

The Philip Harben Series—2

Three-Star Mushroom Dishes

France is the leading gastronomic nation in the world, so to France let us go to find how two of the great masters use mushrooms.

One of the most important gastronomic regions of France is the Haute Savoie. It contains the birth-place of Brillat-Savarin, with the highly appropriate name of Belley, and many others of great repute among gourmets.

On the shores of Lake Annecy, in the Haute Savoie, lies the little town of Talloires—quite a small place you will not find marked in the atlas. But in terms of gastronomy it is a mighty capital, for it contains no less than *four* Michelin-starred restaurants (of which there are only about 700 in the whole of France) and one of them has a triple-star—of such there are only seven in all France *including* the three in Paris.

The Auberge Père Bise is the name of this wonder-spot, and its founder Georges Bise (père) created a dish which exploits the flavour of the mushroom better perhaps than any other dish in the world. Here is the recipe :

ENTREMETS GEORGES BISE: *Ingredients :* (6 portions). 2 lb. spinach (or 1 large tin of spinach purée), nutmeg, ½ lb. mushrooms, 2 oz. butter (or margarine or other fat), 1½ oz. flour, ¾ pint milk, 4 oz. cheese, salt and pepper.

Method : Cook the spinach, pass it through the sieve and re-heat it (or heat the contents if a tin of spinach purée) with a grating of nutmeg. If you can spare some butter or other fat to work in at this stage it is an improvement, but I have not included it in the list of ingredients—it is over and above. Spread the hot spinach purée in a shallow fireproof dish and place the mushrooms on top—cleaned, but not peeled, sliced horizontally in half if they are very large. Put the dish under a gentle grill while you make a cheese sauce as follows :—melt the butter in a small saucepan, stir in the flour, beat the milk in gradually, bring it to the boil stirring all the time and it will thicken. Grate the cheese and stir it in, season with salt and pepper. Pour the cheese sauce, boiling hot, over the mushrooms and spinach and brown the dish off under a hot grill.

The remarkable thing about this dish is the effect got by the union of the three "earthy" and fundamental flavours—cheese, *mushroom*, spinach.

For the other recipe we will go to Paris itself, and again visit a three-star restaurant (Mushrooms being the subject, let us be snobbish and go only to the *best* places). There are only three in the whole of the World Capital of Gastronomy. The Restaurant Lapérouse is on the Left Bank and this is the recipe which Maître Topolinski gave me :

OEUFS POCHES LUCULLUS: Cook together equal amounts of shredded lettuce and chopped mushrooms in butter till soft. Spread this mixture in a fireproof dish where it should attain a good depth. Make little wells or

pockets in the mixture and into each drop a lightly poached egg. Cover with grated Gruyère cheese and brown off in the hottest oven.

I wish I knew how to put in print that finger and thumb gesture which a Frenchman makes when he samples anything as wonderful as this dish of Topolinski's.

Publicity Ideas, Please!

The fact that we have a Publicity Committee does not mean we should leave everything to them. They would appreciate any suggestions from members which might help them in their task of encouraging the purchase of mushrooms.

The Editor frequently asks for ideas. Mr. McGregor Bulloch recently responded with this suggested display bill for greengrocers' windows :

To give some idea of the cost of such a bill, measuring 8″ × 10½″, for example, printed from a half-tone block on white art paper, with captions printed in red, the following quotation has been obtained : 500 copies, 6d. each ; 1,000 copies, 4d. each ; 5,000 copies, about 1½d. each.

The window bill illustrated is not available, at any rate at the moment, and is reproduced only to give members (and the Publicity Committee) an idea of what one progressive grower feels might be done to stimulate demand.

TWO FARM WALKS

SHELVES AND TRAYS IN LANCASHIRE

About 30 mushroom growers attended an Area Meeting at Burscough Bridge, Lancashire, on Tuesday, 18th September, arranged for M.G.A. members by Mr. Fred. C. Atkins (Chairman) and Mr. Tom Orritt.

In the morning the party was conducted by Mr. Royce Martland around three of the mushroom farms of Messrs. James Martland Ltd., of Burscough Bridge. Most of these recently-erected houses are on the Shelf System, but about 1,500 long boxes are used during the winter months on the Tray System.

After lunch and an informal discussion at the Royal Hotel, the party moved on to congratulate Mr. Orritt on his highly-ingenious adaptations of the Tray System. Mr. Orritt is one of the pioneers of this system in England, and all admired the manner in which limited space had been utilized to capacity. Particular interest was aroused in his soil-pasteurizing trays, a method believed to be unique in this country.

The Grower reported that he "follows the American recommendation of 140° F. for six hours, though 160° F. for four hours is an alternative he has not tried." The casing soil is steamed in trays, each tray containing sufficient soil for each tray of compost.

Afterwards Mr. Atkins expressed thanks to Mr. Martland and Mr. Orritt for allowing the party to spend such an instructive day on their farms.

Large Kent Gathering

Much credit is due to Mr. W. A. B. Harding and Mr. G. W. Baker for organising in Kent on Saturday, 27th October, what is generally called a "Mushroom Farm Walk." Some might like to suggest it is better described as a "Mushroom Growers' Natter about Mushrooms."

To show the manner in which the efforts of these two gentlemen have been appreciated, one had only to note that some sixty growers, with their wives, managers and foremen, attended a most interesting walk round Mr. G. V. Allen's establishment at Bilting where they were able to see the culture of mushrooms obviously carried out with thought and enthusiasm.

It always appears that one feature about mushroom growing is the very many varying ways in which one can do the same job, coupled with the fact that mushroom growing is always full of new ideas whilst, as in every other industry, some of the old ideas still seem to produce the goods.

After a most interesting hour on this establishment, the party made its way through the Kent countryside to Captain E. A. Gook's farm just outside Faversham, and here again the general businesslike lay-out seemed to appeal to all the visitors. One had the grave suspicion that Captain Gook or his workpeople had spent an extra amount of time combing and dressing up the compost heap ! It was really an example of, shall we say, sym-

metrical precision. Nevertheless, we have found that a job well done like this is an excellent reminder to mushroom growers that good order and care are two of the absolute necessities in successful mushroom growing.

Mushroom growing seems to appeal to all ages. We did not get the opportunity of asking who was the oldest member of the party, but we certainly had with us a young person less than a twelve-month old who seemed to agree with everything that our worthy new Chairman, Mr. J. Stewart-Wood, said in his discussion on Successful Growing by the Tray Method, but apparently could not accept all that was said in the following discussion and was removed from the room screaming (and to his bottle, as it was then already official 'opening time' at the hostelry. —"ONE PRESENT."

Mr. Flegg's Article : How Much Lime . . . . . .

There was an unfortunate omission from Mr. P. B. Flegg's article on "How Much Lime?" in Bulletin 25. On page 267, the fifth paragraph should have read :

The method of determination of the lime requirement used at the M.R.A. laboratory is to take ten gram samples of soil and add to each increasing amounts of calcium hydroxide solution (slaked lime). These mixtures are well shaken and time allowed for the lime and soil to reach equilibrium. The pH of each sample *is then measured. The readings are plotted on a graph and the correct amount* of calcium hydroxide required to bring the soil to pH 7.5 is read off and converted into pounds per ton of soil.

TRADE SHOW, 1952

THE MUSHROOM INDUSTRY EXHIBITION will be held in the ASSEMBLY HALL, WORTHING, on Wednesday, 5th March.

A complete programme will be sent to all members well in advance. Many firms will be taking stands, and this year there is to be a grand produce display and competition for the M.G.A. Challenge Cup, with two other cups and generous cash prizes.

We will be showing the new Plant Protection/Darlington colour film on mushroom growing, and a Brains Trust has been arranged for the evening; Dr. James Sinden has hinted that he might be persuaded to take part.

There will be a cooking demonstration for the wives of members and the public are to be admitted.

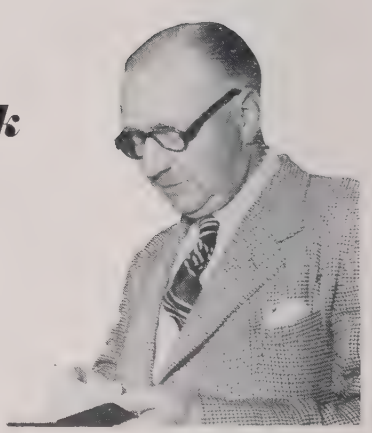
The Show will open at 11 a.m. and we have the full use of the Restaurant. A fully Licensed Bar is being laid on and an extension obtained so that it can remain open during the evening.

Full details of the Challenge Cup Competition will be made available to all members when the Competition Committee have decided the conditions and how the prizes are to be allocated.

For you North Countrymen, the *Daily Mail* Ideal Home Exhibition opens in London the day before.

The next annual RESEARCH OPEN DAY at Yaxley has been fixed for the afternoon of Wednesday, 23rd April. The following day there will be a REFRESHER COURSE at the Angel Hotel, Peterborough. Make your hotel reservations early.

Mr. Middlebrook Consults His Diary



Aug. 20. A correspondent in a Sunday Paper writes : "A neighbour bought a pound of mushrooms and took them home. The following morning he was amazed to find a substantial crop of mushrooms had grown overnight on his lawn. He gave away the bought ones." I don't see the point of such trivial reporting, though I most sincerely hope these early morning finds don't become a habit !

Aug. 21. Latterly we've had thousands of ink-caps in every compost we've filled. Usually ink-caps are said to be a sign of under-composting, so we are investigating the possibility of too much nitrogen delaying the process—this possible excess being introduced by pumping back drainings which may be applied too late with the short composting method. We are also looking again at the problem of compost moisture content in the summer season.

Aug. 26. *Dactylium*, from which we are suffering considerable losses, is supposed to come in with the soil. We use the same soil in all houses but the fungus is nearly all in the American wood houses and only (so far) in two small spots in Handcrafts (concrete beds). The latter have poor air movement in summer and it therefore looks as though *Dactylium* depends on air movement for its existence and spread. Certainly more air, forced or natural, is no cure. Could there be a hangover (from some long-distant crop) in the timbers ? We also have far too much *Verticillium*, which certainly **is** diminished by more air. The happy position is therefore, we give more air to clear *Vert.* and automatically increase *Dact.* Of the two I think *Dactylium* is more deadly. It can ruin a house so quickly.

Aug. 29. More about ink-caps. We may have been deceived. They may not denote under-composting but rather too much surface moisture. The inkcaps referred to have appeared in far greater numbers on top beds than on bottom, and also more in Handcrafts than in American houses. There is less condensation and therefore less surface moisture in the Americans. A far safer sign of under-composting is *Chaetomium*. If a compost, after filling, is capable of

producing a high enough temperature to grow *Chaetomium* it is, I think, not composted enough. White Plaster Mould is another good proof of under-composting.

Sept. 3. This week's supply of meat was burgled from a Yorkshire butcher's shop. A few afternoons later in a nearby school two boys were talking. Said one " I had two mutton chops for breakfast this morning." " That's nowt," said his pal, " our dog had four chops for his dinner." Both fathers are serving a sentence.

Sept. 11. Spent mushroom bed, according to Dr. Bewley, is a valuable type of organic material for many crops after the mushroom mycelium has decayed. Two questions. Why **after** the mycelium has decayed ? How soon does it decay ? I have found such compost useful for many crops when it was applied immediately from the growing house. Perhaps by the time the crop requires the food the mycelium **has** decayed. If so the conditional reference does not apply.

Sept. 17. I am told that the Leaver Mushroom Company in Canada grows 1½ million lb. of mushrooms from 300,000 sq. ft. using 7,000 tons of manure and 85 men. I don't know whether this is on trays or shelves. The labour force suggests considerable mechanisation. Apart from labour, however, 5 lb. per sq. ft. per year is not much lower than our Brayton cropping where we use proportionately the same amount of manure. If the figures are for shelves it seems to show that we in this country are not so far in advance of the " other side " as we would like to think. If they're for trays—well, I'll leave you expert traymen to work that one out.

Sept. 18. Spent a most interesting day at the Lancashire Area Meeting. The high-light, I think, was the visit to Mr. Orritt's "farm" underneath the arches. This highly ingenious effort, though on a comparatively small scale, is the most efficient thing I've seen in mushrooms. The operational area is inconceivably small, but every process is treated thoroughly and comprehensively. Every square foot of available space is used and the general lay-out and design is, in its small way, an example of perfection in the tray system. Underneath those arches Mr. Orritt grows a lovely quality of mushroom and he does it by . . . . . but then perhaps he wants to keep his secrets. Anyway if you want to try some arches of your own for mushroom growing first go and see Mr. Orritt's adaptation.

Sept. 26. The above visit has led me to think quite a bit more about trays. One can compare trays and shelves from many angles. One is particularly interesting : from a comparison between our shelves and Mr. Orritt's tray method the fact seems to emerge that we produce more mushrooms per man than he does. Some argue that, all other things being equal, pounds per sq. ft. is the ideal standard. Others say the only true assessment is pounds per ton of manure. But surely, as labour is now about 50% or more of our costs—by far the largest single item—" pounds per man " is the critical factor, or more accurately " lb. per £ of labour."

Sept. 29. Further *re* trays (I must have written nearly a book on the topic already) : trays at 5 crops per year with each crop 50% greater in area would seem to be a staggering improvement on shelves. But I have made the startling discovery—I'd never thought of working it out before—that we are doing 3 crops per 50½ weeks on shelves. I had thought we were doing 2½ per year. The extra half crop per year makes a considerable difference when comparing the methods. If only four crops are taken from trays—and this seems to be nearer the practical average than five—I think shelves have the advantage despite the 50% additional area of trays. And when you consider that even the 50% additional area is now being thought too much, you may reasonably ask "Are trays really so much better?" If the editor would sometime give me a page for some hard down-to-earth figures I think I could show you where the answer might lie. (*As soon as you wish, S.M. !*—EDITOR.)

Oct. 5. According to the *British Farmer* about 100,000 tons of straw is used annually for paper making—a figure likely to increase. Wheat straw is preferred though not necessarily used exclusively. As one who has been compelled frequently to plough in many acres of sound lettuce and other vegetables I might reasonably ask our research people if these wasteful by-products of the English soil might be induced to make a good base for mushrooms composts.

Oct. 8. From the N.F.U. Information Service. Part 2 of the Finance Act 1951 provides that the (present) 40 per cent. initial allowance on farming plant and machinery will be suspended in respect of expenditure incurred on or after 6th April, 1952. Now is the time to buy your motor cars, lorries, vans, elevators, conveyors, composters, soil breakers, motors, pumps, sprayers, tray packing machines, casing packers, boilers, coolers and the conveyor belt for handling the mounting millions of mushrooms manufactured by this monetary manipulation. Sole remaining restriction ; can you get them ?

Oct. 13. I was glad to note last night, at the opening of the Holme Moss TV transmitter, that Mr. Philip Harben suggested mushrooms as a filling for the omelette he so skilfully and speedily prepared before the cameras.

Oct. 15. The gilled pipes referred to in a previous Diary are proving most satisfactory so far. One 2″, as opposed to two 4″, is in fact giving more heat than one might expect from two 4″. It remains to be seen whether time and rust on the gills lessen the effectiveness of the type.

Oct. 20. A visiting grower suggested the use of Cameron Trickle Irrigation for watering either synthetic compost or very strawy stacks. I tried it but found it too slow. So in an inspired moment I decided to bracket the trickle lines to the inside walls of a brick house, hoping that the constant drip might introduce a higher house humidity, partly from the free water dripping down the walls and partly by the amount absorbed by the bricks. Relative humidity tests show a 5% advantage over a similar house without the system installed. Yet strangely there is no difference whatever in the quality of the mushrooms in the two houses. Another pretty theory gone west.

Oct. 26. Combine the tray system (5 crops per year) with synthetic composts (large cubic capacity of chopped straw) and you have to double up your composting area, ground, sheds, or what have you.

Oct. 28. No-one knew anything about it. No-one had tried it. The experts could say nothing except a typically guarded "it may be possible." Some, without a shred of reason, advised me not to try it. Others, without a shred of sympathy for me, urged that I certainly **must** try it. Finally those who knew me well said that no matter what advice was given they knew I **would** try it. I did. I tried the short composting method with an M.R.A. synthetic. The result—you'd be surprised—or would you? At any rate, positive or negative, I'm not going to tell you . . . . . not yet, anyhow.

FARM FOR SALE : Yorkshire, Nr. Leeds as a going concern, well established, good markets. Excellent modern bungalow; 5 sheds providing 6,000 sq. ft. approximately; bed and shelf methods in use; Packing Room; Sterilisation Plant; Main Water and Electricity; 5 to 32 acres excellent land; additional modern detached house if required. Inquiries to M.G.A., Yaxley, Peterborough.

NEWCOMERS to the M.G.A. Executive

Mr. G. W. BAKER is a director of Broadham Produce Co., Ltd., Oxted, Surrey, which took over an old-established mushroom farm of 10,000 sq. ft. six years ago. Has now increased the farm to 25,000 sq. ft. and growing on a combination of the Tray and Shelf systems. Director also of Baker & Son (Oxted) Ltd., nurserymen and landscape gardeners. Keen on supporting Area Meetings with a view to consolidating and increasing M.G.A. membership, which will in turn enable more funds to be spent on publicity to popularise the consumption of mushrooms.

Mr. R. G. DARLINGTON was at school at Ardingly, then London University. Mushroom " apprenticeship " West Chester U.S.A. 1938, then with W. Darlington & Sons Ltd., up to 1940. 1940-1946—in the Army—subaltern Reconnaissance Corps R.A.C. in N.W. Europe. Since 1946 a director W. Darlington & Sons Ltd. Activities of the company—manufacture and sale of Spawn and related products and mushroom production on trays at Experimental Farm at Angmering, laying 160,000 sq. ft. per annum.

Mr. M. C. LUXMOORE was first engaged in the growing of mushrooms fifteen years ago and, but for a gap of five years service with the Army, has been growing ever since. Until recently has always grown in large American-type houses, with a capacity of three or four thousand square feet. A year ago started to build at Yaxley a Mushroom Plant which he hopes will be the first never to have enlisted the aid of the common horse. Managing Director of Snowcap Mushrooms Ltd., Yaxley.

CORRESPONDENCE . . . .

I hope you will fight tooth and nail against the proposed **nationalisation** of the vegetable distribution trades. Admittedly the present system is not perfect, but a system of Civil servants would be catastrophic, and can be no excuse for letting our freedom go like good little Red boys and girls. It is time that we showed a little of the guts and spirit of the Channel Islanders.

Captain D. K. KIRK.

Fred. C. Atkins Thinking It Over . . . . . .

Half-an-Inch of Stalk

I had started to talk about prices, when I noticed my visitor looking dejected.

"Never thought I'd have to wear glasses," he ventured at last.

"They rather become you," I smiled. "But they don't conceal that you're anxious about something. What is it?"

"Well, as a grower I try to produce good quality mushrooms and I leave the rest to the wholesalers. But you like your mushrooms to be graded, to have short stalks, to be packed in pretty cartons with cellophane windows. Is it worth it?" He looked me straight in the eyes.

"I think so," I replied. "Anyway, it will be in the long run. Salesmen, retailers, consumers—they get to know our mushrooms and ask for them by name. I would like to improve on our grading, as a matter of fact. I would like people who want the very best mushrooms to insist on ours; but they will only do that if we keep on improving our packaging, and give them value for the higher price they will expect to pay."

"Yes, yes, I know." He seemed a little irritated. "No doubt you think yourself a businessman. But is it business—is it commonsense—to cut off half-an-inch of stalk just because the Harding Committee said the stalk shouldn't measure more than one inch?"

My visitor took out a cigarette, lit it, and glared at the smoke as if it had no right to be there.

"I've sent mushrooms to market for 20 years without bothering about stalk length," he continued, "and no-one's complained yet. Half-an-inch of stalk doesn't seem a serious matter perhaps. But do you realise that half-an-inch of stalk probably averages at least one-twelfth of an ounce, and that to every pound of trimmed mushrooms you probably throw away two ounces, or $12\frac{1}{2}\%$?"

He removed his glasses, cleaned them, replaced them quite violently, and exploded: "And that means, if your target this year is 200,000 lb. of mushrooms, you will be wasting 25,000 lb. In hard cash, presuming you get 4/- lb. for mushrooms, and 9d. lb. for stalks, you are more than £4,000 down at the end of the year.

"Ah!" said I. "But do you realise that some of our salesmen have been able to command 6d. a pound more for our cartons than they can get for the usual chips? And if in time all our salesmen could get that extra 6d. lb., we would in fact be nearly £1,000 better off!"

My friend was not to be denied. "That's all very well," he said, "but at the moment all your markets don't like these cartons, and some perhaps never will. And until and unless they do, you will be out of pocket."

"Don't be too sure," I countered. "In times of glut only the best will sell, and I want to ensure that ours are regarded as the best. A few pounds up or down may not be important just now; it would be worth our while to insure in better days for the worse times which may be

just around the corner. Let me tell you of the parallel foresight which actuated a small group of growers at the end of the War. Believing that Research was . . ."

I was angrily interrupted. "Not again, please," I was urged. "For heaven's sake let's keep in the packing room until we settle this. You once told me you gave an ounce over weight on your 2 lb. chips. That means that for every pound you sell you give away half-an-ounce. On 200,000 lb. you give away—give away !—not less than 6,250 lb. of mushrooms. At 4/- lb. this is £1,250. Is that business? You sit there with your wall charts . . . . . ."

"Wait a minute," I interposed. "Let me ask you something. Why do you pick your mushrooms while they are barely-opening cups? Don't you know that they continue to increase in weight until they are flats, and that by picking prematurely you could be depriving each mushroom of something like 15% of its potential weight. If your target was 200,000 lb. you could surely step it up to 230,000 lb. And up to 250,000 lb. if you watered the night before picking. Why don't you?"

"But I wouldn't get so much money for the flats," my friend retorted. He could not hide his interest, however. "Just how would it work out, financially?" he asked.

But I had my wall charts to attend to.

EELWORM CONTROLLED

Important Observations by André Sarazin

The winter of 1950/51 gave unusually humid conditions in the caves in France. Manure composted outside was usually too wet and the high humidity in the caves prevented any drying-out of the surface of the beds. In consequence many crops were lost by the depredations of eelworm.

I was particularly interested to observe that eelworms are capable of secreting toxic substances which destroy the interior of the caps of mushrooms. If the mushrooms are cut down the centre, this dead core, as it were, is at once evident.

Another observation I made was that rapidly **growing** spawn, in compost of **normal** moisture-content, is antagonistic to eelworm, preventing their multiplication although not killing them. When the spawn has run and cropping starts, this antagonistic substance (or substances) is no longer produced.

Pressure of business has prevented me from concluding my studies on the control of eelworm, but great promise is shown by a solution of hydroxyquinoline sulphate. A dilution of 1 in 10,000 applied to infected beds kills the eelworm but not the mushroom mycelium. The flush following this treatment is normal.

Until now, hydroxyquinoline sulphate has been known only for its fungicidal properties. Now that we know it to be effective against nematodes it should prove valuable to farmers and market gardeners struggling against eelworm, as well as to mushroom growers.

BATH CONFERENCE

Morning Session on Mushrooms

A Conference of the Horticultural Section of the South Western N.A.A.S. Province was held at the Guildhall, Bath, on Tuesday, 6th November. The morning session was devoted to Mushrooms and about 100 growers attended.

The first speaker was Mr. A. G. Pointing, a Director of the M.R.A and a grower well known in Yorkshire and Wiltshire, whose subject was Mushroom Production. Mr. H. H. Glasscock, the N.A.A.S. plant pathologist, followed on Mushroom Diseases.

In opening his talk Mr. Pointing said the successful grower must be an enthusiast, a keen observer of detail, and prepared to take infinite pains—nothing less would do. He added that in his view Mushroom Growing was the problem child of Horticulture, and therefore a good grower must be an understanding and patient parent. The talk was illustrated by the Film Strip on the subject which was recently produced by the Ministry of Agriculture's Horticulture Advisory Service.

Mr. Pointing made a comprehensive survey of the various aspects of production, emphasizing the necessity of endeavouring to get the right growing conditions in the various types of houses. He said that whilst many growers had houses especially designed and built for the purpose, there were, he thought, a far greater number whose problem was to get the right volume of production from the wrong type of house, and their measure of success was the test of their ability as growers. He appealed to all mushroom growers present to join the M.G.A. and support the M.R.A., on which so much depended.

Mr. Glasscock followed with what he described as the more dismal side of the picture, showing lantern slides of mushrooms affected by the various diseases. He gave details of the most efficient methods of combating them, but went on to say that to take steps to avoid disease as far as possible by proper methods of hygiene was obviously preferable to having to undertake the cure.

Mr. G. Griffiths opened the subsequent discussion. He said that in order to reduce the high production costs of to-day he had recently cut out some of the procedure generally accepted as essential, such as sterilizing trays, carefully turning composts, etc. He asked whether in view of the fact that so far his crops had not been affected he could safely carry on in the same way.

Mr. Pointing's reply was that, in his opinion, a grower might get away with this for a time, but he felt sure he could not do so indefinitely.

Other questions were put to the speakers, who were warmly thanked by the Chairman, Mr. H. A. Whitemore.

Important New Series—

Notes from Advisory work

By Dr. R. L. Edwards

1. Use of the new insecticides.

The mushroom grower has never been as well equipped as he is to-day with materials for control of insect pests. The very potency of these new insecticides brings with it the need for care in their use, as three cases in my recent experience show.

Mr. A., growing on a very small scale, had a severe attack of mites. He used a 5% insecticide dust rather liberally and unevenly on part of the beds, a different insecticide in the form of spray on another part, and both together on yet another. Where both had been applied the bed did not crop, whereas it did where only one or the other had been applied. It was not possible to estimate how much the yield was reduced, if at all, in those parts of the bed which did crop.

Mr. B. wrote asking why a whole house had developed rose comb on the first flush. He had used a smoke generator containing one of the common horticultural insecticides which he thought was safe. On going into details I found that he had used an industrial type of smoke generator suitable for 40,000 cu. ft. in a house of less than 10,000 cu. ft. This generator also contained a cruder form of the insecticide than the purified material used in generators intended for horticultural use.

Mr. C. had a house with a perfect spawn run and nothing apparently wrong with the casing soil, yet pinheads formed and did not develop. He wanted to know why. He had been troubled by flies, and since spawning he had smoked the house 4 times with the same industrial smoke generators as Mr. B., in the same overdose (4-5 times recommended concentration in air). He had also used two other types of smoke generator, and a proprietary insecticide dust, each more than once. These repeated applications were understandable because, even after all of them, there were still flies in the house. However, there were no signs of larvae in the beds, and the flies were almost certainly coming in from outside. As the insecticides which have a quick knock-down effect do not persist, and the persistent ones are slow-acting, a steady invasion would always maintain some flies in the house, but they were unlikely to breed in beds treated as these had been.

There have been other reports of damage caused by some of the new insecticides, of which I have not full details. On the other hand I know growers who have used some of them regularly for five years without any trouble at all.

It is now well established that both DDT and BHC, the two most widely used, are safe and effective **if they are properly used.** I prefer BHC because I think it is rather safer and more effective.

As a result of these and other observations I suggest the following rules for the use of insecticides :—

1. Only use insecticide preparations specifically recommended for mushroom growing by the makers, or by a responsible authority familiar with mushrooms, and in the way recommended.
   The fact that a particular insecticide can be used safely does not mean that all its preparations are always safe.
2. Be careful to use the right amount of insecticide in proportion to weight of compost, bed area, or cubic capacity of the house. Weigh powders the first time ; after that you can use a convenient measure if you know what weight it holds. Always measure liquids and use the right dilution. 1 gallon of 2% dilution may not have the same effect as 2 gallons of 1% dilution on the same area of bed.
3. Do not use persistent insecticides too often. For example, if you have given one or two dustings which should control flies and they still appear, consider where they are coming from before you pile on the dust. You may have stopped them breeding in the house, but if they come from outside you can only control them completely at the source.
4. Do not mix insecticides or apply two different ones to the same bed without responsible advice.
5. Always apply insecticides, if possible, when the bed is bare or nearly bare.

If these rules are followed, insecticides can be used safely yet effectively.

Research Appeal Fund

The 1951 Fund has closed at £1,314 6s. 3d. Contributions since the last Bulletin went to press have been received from the following, to whom go the thanks of the M.R.A. Directorate :

	£	s.	d.
Douglas, Brig. A. S. G.	20	0	0
Sinfield, G. & Son	20	0	0
Thwaites (Manchester) Ltd.	10	10	0
Boxall, G. W. & Sons Ltd.	10	0	0
Millais, E. G.	5	5	0
Ohman, Miss I. (Sweden)....	5	0	0
Sleight, W.	5	0	0
Westin, G. (Sweden)	5	0	0
Batchelor, J. G.	2	2	0
Vitax Ltd.	1	5	0
Rice, G.	1	1	0
Hart Fertilizer Ltd.		16	0
Kevan, D. R.		11	0
Bankers' Orders	26	0	0
	112	10	0
Brought forward from Bulletin No. 25	1,201	16	3
	£1,314	6	3

SOME ASPECTS of the TRAY SYSTEM

by **Captain GILES TWEEDIE**

4—Summing Up

A few weeks ago I had the privilege of seeing over probably the neatest and most compact set-up for a small family mushroom business. By the ingenious resourcefulness of the owner, an average of 18,000 lb. per annum was being produced from 4,000 sq. ft. on trays, and the only paid labour was one youth of 17 years. It was, of course, Mr. Orritt's plant at Burscough Bridge.

After we had looked round I was in conversation with another grower of much experience with shelf beds who was also growing in trays. He told me, in effect, that he was turning out at least an equivalent weight per man employed. But I would emphasise that his output was well above average.

Dare I draw any deductions from the foregoing? Possibly that if you are doing "quite nicely, thank you" on shelves it would be stupid to change over to trays. Trays seem to suit some growers' technique—but others', not at all.

Many hold the opinion that a well-equipped heat room and adapted farm buildings prove an efficient way of utilising spare space, balancing out the cost of trays and even of some rollers. I agree; don't you? This method is being used with notable success by Messrs. James Martland Ltd., in addition to their shelf culture.

Most of us are now agreed that, on a Tray Farm, **tight scheduling of the cropping duration is essential to efficiency.** Provided the trays can be got into production in five or six weeks from spawning there is an excellent chance of averaging $1\frac{1}{2}$ lb./sq. ft. just over four times a year, i.e. over 6 lb. per sq. ft. in the year. This should surely satisfy most.

What about the capital cost of trays and rollers? I have now come to the definite conclusion that **a small, cheap tray is the answer.** Indeed, I am growing many a pound in South African grape boxes ($1\frac{1}{2}$ sq. ft.) bought for 4d. each, less than a sixth of the cost of standard trays on an area basis. If Truffle appears I simply burn the lot. Rollers are dear, of course, but they pay for themselves easily in six months.

Ideally, I would recommend the following for a mushroom farm on whatever scale: Cheap, light grape or similar boxes, powered or gravity-fed rollers, labour mostly female and juvenile, and a Compton Hydraulic Loader fitted to a tractor.

The larger the farm, of course, the greater the opportunities for getting the most out of mechanisation. The most costly equipment—fork trucks, compost-filling and casing machines, electric hoists and the like—will be well out of reach of most growers in this country and can only be warranted on the vastest scale.

What does the future hold? May I suggest it is in YOUR hands. We are told that what-

ever method we employ it is time we cut our costs. Can trays give YOU more and cheaper mushrooms?

You may be in as much doubt about the answer as my wife, who helped me with these Aspects. May I be permitted to thank her—and you, for being so patient?

"Their Taste is Exquisite"

Philip Harben at Mushroom Lunch

One of the best attended annual lunches arranged by the Mushroom Growers' Association was held at the Criterion Restaurant, London, on Wednesday, 3rd October, 1951.

Mr. Philip Harben, the television cook, was Guest of Honour. With him was Mrs. Harben, and among the other guests were two Life Members of the M.G.A., Dr. R. L. Edwards, Director of Mushroom Research, and Dr. W. M. Ware; Mr. C. E. Hudson, horticultural head of the N.A.A.S.; Mr. R. A. Hughes, representing the Ministry of Agriculture; Mr. G. Samuel, representing the Agricultural Research Council; Mr. W. Morley Davies, secretary of the Agricultural Improvement Council; Mr. E. H. Gardener, president of the N.F.U. Show Society and chairman of the Central Horticultural Committee; Mr. H. R. Haynes, Horticultural Secretary of the N.F.U. and Secretary of the Show Society; Mr. Oliver Robinson, Editor of *Good Housekeeping*; Miss Georgie Rodgers, Principal of the Good Housekeeping School of Cookery; Miss Joanna Chase, Editress of *Woman's Own*; and Mr. A. S. Mancy, printer of this Bulletin.

The Chairman, **Mr. Fred. C. Atkins,** referred to the fact that, just 120 years ago, Edward Callow had written a book entitled after the fashion of those more leisurely times "Observations on the Methods now in use for the Artificial Growth of Mushrooms, with a full explanation of An Improved Mode of Culture by which a most abundant supply may be procured and continued throughout every month in the year, with a degree of certainty that has in no instance failed."

"The Boss says the mushrooms at the M.G.A. Luncheon smelt simply lovely!"
(By courtesy of *The Grower*.)

We were a little more concise to-day, and generally more modest, although there regularly appeared an advertisement of a supplier of mushroom compost whose instructions "if faithfully followed will ensure success all the year round." (Laughter).

"The fact is, of course, there is no infallible system," said Mr. Atkins. "Mushrooms always have been, and probably will be for as long as we here are in business, extraordinarily difficult to grow with any degree of certainty. There are some who fear our £5,000-a-year research station will solve overnight the long list of problems which daily beset us. Such a prospect is fascinating but fantastic, and altogether without hope of fulfilment. Compost and soil alone would still pose a thousand questions if our tiny staff worked on nothing else for the next 50 years.

"There is, for example, considerable divergence of opinion as to the value of pH readings of compost. For the benefit of the uninitiated, I would explain that when we speak of measuring the pH of composts we are referring to their degree of active acidity.

"Were we to speak of the P.H. of Cooking, we should, of course, be referring to Philip Harben!

"Incidentally, I was reading over the week-end a review of Mr. Harben's new Television Cooking Book. The reviewer suggested that one of the advantages that a television lecturer enjoys is that he sees none of the faces of his audience; he is able to concentrate and talk 'as if to some sweet but rather stupid child of his own fancy.' To what extent this afternoon's audience is to his fancy I cannot say (laughter), but we welcome him most warmly." (Applause.)

Mr. Philip Harben said at the outset that he had accepted the invitation to the Luncheon with alacrity because he felt they had done him a high honour, for they produced a fine gastronomic article. He also felt they would give him an excellent meal—and he confessed the *Psalliota bispora* were excellent (laughter).

Before coming along he had thought he ought to know something about this highly important article of diet. When food was plentiful and we could have a free choice of food, nutrition and dietetics could be thrown out of the window, because natural appetite was an infallible guide to feeding. But when food was scarce they were extremely important.

He had consulted two authorities, McCance & Widdowson and Hutchison. He now knew that, having eaten approximately $\frac{1}{4}$ lb. of mushrooms, he had imbibed copper, iron, manganese, sulphur, potassium, calcium, chlorine and phosphorus in comparatively small quantities. He had no doubt he would give out a high metallic ring. Just as he thought, the value was not to be found there. Was it the calories? He had consumed seven calories compared with 225 to be found in bread and 800 in butter. Perhaps it was the protein, the body-building food? He found the protein was 1.8 per cent., compared with 60 per cent. in cheese.

"I therefore came to the conclusion that mushrooms have no dietetic or nutritional value as food," declared Mr. Harben. "They have no value at all except an exquisite taste! And there we have our finger on the spot. Why does a girl wear a pretty hat? To keep her head warm? Mushrooms are free from the sordid taint that we are eating them simply to nourish ourselves!

" But I never cease to tell people that there is only one golden rule for cooking, and that is : Enjoy what you eat. If you regard food and meals merely as necessary interruptions to the day's activities, you will never become a cook. The whole value of mushrooms lies in the fact that their taste is exquisite. They enhance the enjoyment of food. Food which you do not enjoy is valueless.

" Any amount of food has been ruined because it was not enjoyed : any amount of food has been transformed by the magic wand of mushrooms.

" The French are not better cooks than we are. In manual skill the English housewife can beat the French housewife hollow. But in France the use of mushrooms is understood. Garnish is a matter of high art.

" During the War the Ministry of Food had sponsored programmes on the radio, the Kitchen Front. In the course of one of them I wanted to say something about mushrooms. This was heavily blue-pencilled because mushrooms were expensive. I appealed and eventually won my point, that **the amount of mushrooms required to make ordinary food angel food was not expensive."**

He understood that the growers in this country produced 25 million pounds of mushrooms annually. They were 25 million reasons why we could produce as good food here as anywhere else in the world ! (Applause).

Mr. H. R. Haynes expressed the gathering's appreciation to Mr. Harben for his very warm and witty speech. He did so, he said, with particular pleasure, for he had long desired the opportunity of thanking Mr. Harben, on behalf of food producers, for all he was doing to encourage in this country the important job of cooking. (Hear, hear).

He was also pleased of the opportunity of saying something about the M.G.A. His mind went back to those early days when the formation of the Association was only a germ, or perhaps in this company a spore, in the minds of two or three mushroom growers. He recalled visits to Peterborough to meet Mr. Atkins and his friends and discuss how the growers could organise themselves so that their interests could be safeguarded. The Midlands Group was formed into a nucleus committee, and they had a number of meetings at Bedford Square to decide how best to proceed.

" Very soon the M.G.A. was formed as a specialist branch of the N.F.U.," he continued. " You will all agree it was right and proper

that this should be. Mushroom growing was one branch of the horticultural industry, and horticulture is a branch of agriculture. In this way the interests of mushroom growers would be looked after by that powerful organisation, the N.F.U.

" The next step was to see how this development could be conveyed to growers up and down the country. I think the Association was very fortunate in as much as one of its leaders, Mr. Atkins, is also a first-class journalist, and very soon we had those very interesting Bulletins which are so beneficial to the Industry.

" Thirdly, growers felt they wanted their own Research Station, a Station that could deal solely with the many problems which faced them in practice. Within a few months of the formation of the M.G.A. we find another Association launched, the Mushroom Research Association with headquarters at Yaxley. In my view this was a great effort in expression of self-help on the part of the Industry and one which I feel is worthy of the support of everyone, commercial or otherwise, in the mushroom industry."

But the mushroom industry still had many problems to face. He had just received official confirmation from the Ministry of Agriculture that mushroom growers would receive the same allocation of fuel as glasshouse growers. Difficulties like this were always cropping up, and members in trouble should get in touch at once with the M.G.A. Secretary. If an extra push were needed, Mr. Watson could rely on the help of Bedford Square.

" There are international problems too," Mr. Haynes continued, instancing tariffs. "With the help of your Association we have prepared a case for mushroom growers asking for an adjustment of the existing pre-war duties on imports of mushrooms, to bring them in line with post-war values. That case is under consideration now, and it is not going to be an easy matter to bring to a successful conclusion. But with the assistance of your Association and of mushroom growers throughout the country we are doing everything we can to see that the adjustment is made.

" The way is difficult and we shall depend on the Association for a lot of help and the Association will in its turn depend on the Industry for full backing."

Mr. Haynes went on to speak of publicity to increase the demand for mushrooms. Only that morning he had received a copy of *Everybody's* in which appeared a most interesting article by the M.G.A. Chairman entitled Mushrooms Have Their Magic. " I do suggest that this is first-class publicity and a triumph for the Association," he said.

He spoke of the Olympia Show and added : " I think we can now do something else to publicise mushrooms. Just recently we have been organising Weeks—a series of Apple Weeks to publicise home-grown apples—with displays at Selfridge's in London and in five of Lewis's stores in the provinces. It occurs to me, why cannot we organise a Mushroom Week ? Why cannot we really go to town and show the public of this country, the housewives and customers, what your industry has built up ?" (Hear, hear and applause.)

Four photographs taken at the Reception.

In the second picture the new M.G.A. Chairman (Mr. JOHN STEWART-WOOD) is talking to his predecessor (Mr. FRED. ATKINS).

In the bottom picture are M.R.A. personnel (Miss D. G. GANDY, Mr. P. B. FLEGG, and Dr. R. L. EDWARDS) talking to Mr. R. A. HUGHES, of the Ministry of Agriculture (centre).

Four more groups photographed during the Reception.
Bottom may be seen Mr. G. W. BAKER (extreme left), and Mr. BOB DARLINGTON (in glasses), two new members of the Executive Committee.

M.G.A. ANNUAL MEETING

Membership Falls for First Time

Many Topics Discussed

The Sixth Annual General Meeting of the Mushroom Growers' Association was held at the Criterion Restaurant, Piccadilly, London, on Wednesday, 3rd October, 1951, immediately following the Mushroom Lunch.

The Chairman (Mr. Fred. C. Atkins) presided at the outset.

The Secretary (**Mr. Angus Watson**) presented his **Annual Report.** The year had been a poor one for the Mushroom Industry, he said, and there had been a quick reaction in the Association. There had been 100 resignations of grower members, and despite the 63 new members he had to record a loss in membership for the first time since the M.G.A. started. The present figures were 288 grower members and 225 honorary members, making a total of 513.

" On the credit side we have much to be proud of," said Mr. Watson. " The year saw the start of the Area Meetings, which have proved an unqualified success. The Open Day and Trade Show was well attended and showed a profit. The Bulletin took on a more professional air without disturbing editorial policy. And an excellent Refresher Course was run for the benefit of members.

"A start had been made with Publicity. We exhibited at the N.F.U. Market Produce Show at Olympia. André Simon's *Mushrooms Galore* was launched with our help. Some recipe leaflets were prepared."

These were all improvements on past years, and routine work continued to help growers needing advice. The monthly Open Days and the periodical News Sheets had kept members in touch with headquarters. The new office was completed and occupied, housing among the other equipment a first-class Library of mushroom literature available on loan to members. During the year photostat copies of 30 out-of-print works had been added to the Library.

" These things had not been done without help and co-operation," Mr. Watson concluded. " We owe much to Dr. Edwards and his staff at the Mushroom Research Station, and to the Directors of Noble Mushrooms Ltd., who allow members to visit their farm on the First Thursdays. We are always pleased to see the N.A.A.S. Officers at Yaxley." He added a word of thanks to the Trade Press, "without whose generous support we would often be unheard in the world."

The attendance of Executive Committee members had been as follows : Messrs. Atkins, Stewart-Wood, Harding, Simons and Capt. Lawrence, 4 meetings out of 4 ; Mr. Baker, 3 meetings out of 3 ; Messrs. McArthur, Boxall, Filmer, Middlebrook and Sinfield, 3 meetings

out of 4 ; Mr. Hovell, 2 meetings out of 4. Mr. Patterson had been unable to attend any meeting.

Financial Position

Mr. Watson presented the **Statement of Accounts** and **Balance Sheet.** " Members will appreciate that costs have continued to rise during the year, while our income has fallen due to the loss of members," he said. " In view of the fact that the M.G.A. has done more for its members in 1951 than in any previous year, this decline is difficult to explain, but fortunately we had a balance in hand from previous years of about £400 which enabled us to spend £200 on the office. There was a small loss of £30 on Olympia, but nearly three-quarters of the increase in our running costs was due to the following items : Lunches and travelling expenses, £100 up ; Bulletin Index and new propaganda leaflets, £50 up ; telephone, £35 up ; and postages, printing and stationery, £90 up."

Mr. Godfrey asked if the members who had resigned during the year were from any particular area. Mr. Watson said they were not.

Mr. T. T. Leach : Do any of the resigning members state their reason for doing so ? Is it mainly that they are going out of business, or just lack of interest ?

Mr. Watson : About 10% do not state their reasons for resigning. Even after I have written to them, they do not reply.

The Annual Report, Statement of Accounts and Balance Sheet were adopted on the proposition of Mr. H. G. Boxall, seconded by Mr. S. Pointing.

" Don't be gloomy! "

Mr. Atkins said he felt sure all would appreciate that a drop in membership and an empty kitty, occuring during his year in office, distressed him as much as anyone.

" But we should not take too gloomy a view of things," he counselled. " Last summer's slump and the general decline in the value of money led us to expect such a predicament, and although steps were too advanced to escape a depressing balance sheet to-day, economy measures are in operation and we shall weather the storm. Stupid as some of us may be, we are not so moronic as to believe there is no need for the M.G.A.

" Our Secretary has outlined the year's achievements. I managed to attend Area Meetings and Farm Walks in Essex, Wiltshire, Yorkshire, Buckinghamshire, Kent, Worcestershire and Lancashire, and I wonder if any one of the 250 people I met on those occasions thought his journey a waste of time. I honestly believe the M.G.A. to be stronger for those meetings, for so many have told me of the pleasure and profit they derived. I hope the policy will continue.

" For the moment I feel I personally can do no more in this direction ; I need a little more leisure and a little less anxiety. Fortunately for us all, we have in my successor a Chairman younger than any of his predecessors, and in saying Thank You for so many kindnesses to me in the past, and particularly during these last 12 months, let me lead you in giving John Stewart-Wood a warm M.G.A. welcome to the Chair." (Applause).

NEW CHAIRMAN

Mr. Atkins vacated the chair and Mr. Stewart-Wood took over the conduct of the meeting.

New Chairman

Mr. Stewart-Wood, returning thanks, said he felt that taking over the Chairmanship from Mr. Atkins was a very great honour for him. " Mr. Atkins has been indispensable to the development of the Mushroom Industry," he declared. " He was the Founder Secretary of the M.G.A. and has served in every other official capacity. During his year of office he has spared no effort, in spite of ill health, to get round the country to attend Area Meetings and to make his term of office a success. In wishing him a speedy return to good health I would like to thank him most sincerely on behalf of the Industry." (Applause).

The Elections resulted as follows :

Vice-Chairman : Mr. H. G. Boxall (West Sussex).

M.G.A. Executive (eight vacancies) : Captain G. P. Lawrence (Hants.), Messrs. F. C. Atkins (Northants.), F. L. Filmer (East Sussex), G. M. McArthur (Scotland), Stanley Middlebrook (Yorkshire), re-elected ; with Messrs. G. W. Baker (Surrey), R. G. Darlington (West Sussex) and M. C. Luxmoore (Hunts.).

M.G.A. representatives on **M.R.A. Directorate** (five vacancies) : Messrs. F. C. Atkins (Northants.), McG. Bulloch (Dorset), A. G. Pointing (Yorkshire) and J. Stewart-Wood (Bucks.), re-elected ; with Mr. R. G. Darlington (West Sussex).

Messrs. Stephenson, Smart and Co. (Peterborough) were re-appointed Auditors.

Mr. Atkins voiced the particular regret of all that Mr. A. DeB. Hovell, a former Chairman, had felt compelled not to stand for re-election to the Committee and the Research Board. (Hear, hear).

Mr. Hovell, in reply, said he had reached that decision reluctantly, but he was very busy. " I will always be willing to help mushroom growers if I can," he added, " but I feel we need an injection of new blood now and then to keep the Association virile and strong. It is a good thing to encourage younger men to come on to the Executive."

New Vice-Chairman

The **Chairman** congratulated Mr. Boxall on his election. "I personally am very pleased to have him as Vice-Chairman," he said, "because I feel, and many of you here feel too, that he carries the full interest of our Association and he is a first-class and enterprising horticulturist. I have never yet known him stuck for using his initiative and improving his growing methods." (Hear, hear).

1952's Prospects

The Chairman went on to speak of the prospects for 1952. "I do not feel too pessimistic about our financial position," he said. "For one reason, we now have an office for our Secretary and we are no longer dependent on the goodwill of those who supported us for so long and helped us out. Nevertheless, we must realise we have no reserve with which to carry out any new ventures; we must consolidate our position and carry through only such activities as have already been planned."

Last year they had been putting out a News Sheet between each Bulletin; this year they were going to try to do this monthly, to bring members more up-to-date information and announcing forthcoming events. The quarterly Bulletin would continue and, if possible, improve still further.

Trade Show for Worthing

"One particularly important function is coming off on 5th March, 1952," he continued. "We are going to present the Mushroom Trade Show at Worthing. We hope everyone will look in. We are going to publicise it well. One of the main objects is to take the Trade Show to the people who perhaps thought we in the Midlands like to keep such things to ourselves.

"The Research Station's Open Day, at Yaxley on the afternoon of 23rd April, will be combined with the second annual Refresher Course at Peterborough on 24th April. On the evening of 23rd April, there will be a film show. Everyone who attended last year's Refresher Course had a good time in more ways than one.

"The monthly visiting days on the first Thursday of each month will continue, so that anyone who wants to see what is going on at Yaxley can do so at frequent intervals.

"We have several ideas about future Annual Meetings. We might combine them with visits to farms, for example. Your Committee will consider the various ideas which have been put forward and we will let you know what we suggest.

"An important point is to further publicity, so far as we can afford it. We have a Publicity Committee doing a lot of good work trying to bring mushrooms to the notice of the public. You can hardly read a paper or journal to-day without finding a paragraph about mushrooms. You must realise that mushrooms are coming to the fore in more ways than one. Our suppliers, our wholesalers, they say people are asking for mushrooms more now they are coming into the limelight—and that is what we are here for.

Support the M.G.A.

"This year, I feel, we must work very hard for the efficiency of everything we do. Be practical. Be commercial about it. Make the job pay. See that the M.G.A. continues as a body. After hearing Mr. Haynes at the Lunch it would be useless for me to elaborate, except to urge all of you to try to get new members for the Association. Put the M.G.A. across to growers. Tell them of the work we are doing. We shall not be much good unless we have a strong Association to back us up, and the Association in turn needs the support of the N.F.U.

"Finally, let me emphasise that the M.G.A. exists to watch the interests of the mushroom grower in every way. If you have any complaints as to how we are carrying out that objective, I would like you to air them. We want you to be frank about it. If you do not like the way we are running the show, it is up to you to put us on the right lines."

Mr. Hovell : You spoke of the M.G.A. Trade Show at Worthing and the M.R.A. Open Day being separated. Is there any reason why the M.R.A. should not have their Open Day at the same time in Worthing? Could not the films be shown at Worthing too?

The Chairman : Perhaps I did not make it quite clear, but Dr. Edwards is having a stand at Worthing and putting on a show of what is being done at Yaxley.

Publicity

Mr. Atkins : You said the Publicity Committee was doing a lot of good work. What exactly is it doing?

Mr. J. E. R. Simons replied as Chairman of the Publicity Committee. "Our efforts are limited, as you know, by lack of money," he said. "We are now responsible for the Show going to Worthing. The idea of Worthing is not only to make it a Trade Show, as it has been at Yaxley, but also to figure out some schemes whereby we can use the opportunity to publicise, shall we say, Eat More Mushrooms.

"We have one or two ideas. We are meeting in Worthing in the next few weeks to work out our plans how to put mushrooms before the public at Worthing and the large surrounding districts.

"Another thing we are preparing is some simple publicity on Ways and Means of Eating Mushrooms. We are hoping growers will use these small leaflets in their baskets. We are of course continuing to take every opportunity of getting publicity for mushrooms. Perhaps we have done quite a bit towards that to-day by having Philip Harben here to talk mushrooms, and we hope he will say something about

mushrooms on Television. We are hoping that now Mr. Atkins has been relieved of his duties as Chairman he is going to come more to the fore as a publicity man on behalf of mushrooms and write more excellent articles such as that in this week's *Everybody's*. I emphasise that the article is well worth reading ; I hope no grower will say he has not read it !"

Mr. Hovell : I would like to support Mr. Simons's last point. *Everybody's* is read by over a million people and I do feel that this one article has done the mushroom industry an enormous amount of good. I would like to record a vote of thanks to Mr. Atkins for this article. (Cheers).

Mr. Atkins : I am a little overwhelmed. I write many articles ; some are accepted. For this one, *Everybody's* paid me, and you thank me. I am content ! (Laughter).

For those members interested, the Secretary has a few free copies of this issue of *Everybody's*.

Poisonous Topic

Mr. Stanley Middlebrook : There is another side to publicity. This morning's *Telegraph* has a report of people dying from " mushroom poisoning." What are we going to do about it ?

Mr. G. M. McArthur : It says four people died and blames mushrooms for it.

Mr. Hovell : The Secretary should write to the *Telegraph*. Mushrooms are not poisonous. They should make a distinction between fungi and mushrooms.

Mr. T. T. Leach : More reason for buying in the shops and not from fields. There are no poisonous mushrooms in shops.

Mr. Middlebrook : The point is that a million people have read in *Everybody's* that mushrooms are good to eat, and a million have read in the *Telegraph* that four people died from eating them. Can the Association do anything right away ?

Mr. A. G. Pointing : The Radio Doctor gave a talk recently on what he called Mushroom Poisoning. In the public mind all fungi are mushrooms.

Mr. Hovell : Dr. Ramsbottom has gone into all this. The M.G.A. should write on the lines that it is not the mushroom which is poisonous but the Amanita.

The Chairman : We must take action on this.

Mr. Atkins : I suggest you go along with the Secretary to the *Telegraph* Offices immediately after this meeting.

Mr. Middlebrook : A letter should go to every newspaper.

Mr. Pointing : The Radio Doctor as well !

Mr. G. W. Baker : The point to make is that cultivated mushrooms are not poisonous.

Dr. W. V. Peet : Write to the Editor informing him we have passed a vote of censure on the author of the article.

Mr. Atkins : Firstly, on behalf of the reporters present, the dismay caused by the *Telegraph* lies in the headline, not in the report itself. A sub-editor was to blame. Secondly, the English language is used very loosely, and the term " mushroom " describes

all umbrella-shaped mushrooms, whether they are poisonous or not. And the Amanites are umbrella-shaped.

Mr. Hovell : Society associates mushrooms with something good to eat. I suggest you write to the *Telegraph*. You will gain nothing by going to the headquarters of a newspaper.

Dr. Peet : Write to the Press Association.

Capt. G. P. Lawrence : You should be careful to write a tactful letter. Tell them they should not speak of " mushroom " poisoning as it causes harm to the Association.

Mr. Atkins : I don't know whether this headline appeared in any other newspaper. The *Daily Express* says to-day that food poisoning had been almost ruled out as the cause of these deaths.

Mr. W. A. B. Harding suggested that the Committee meet at 5 p.m. This was agreed. (At that meeting it was decided to write to the Press urging them to differentiate between edible mushrooms and poisonous fungi).

No House

Brigadier J. S. Nicholls : There is a regulation of the Ministry of Agriculture whereby on a farm where there is no residential building a special licence can be applied for to the County Council. I have a mushroom farm in Wiltshire with no residence. The manager has to live in rooms six miles away ; his wife and child are 50 miles away. The only way to provide suitable accommodation is to build. I got information yesterday to the effect that the Ministry considers that this regulation cannot be applied to mushroom farms. I suggest this is a matter of principle and should be taken up ; it concerns the industry as a whole.

Mr. G. V. Allen : I have had some experience with building licences. It depends on the size of the holding. Because a mushroom grower needs only a small area of land to produce a lot of stuff he is not considered worthy of a house.

It was agreed that the Secretary should take the matter up strongly with the N.F.U.

Fuel Allocation

Mr. Allen : It is rather like the fuel position. A man who grows mushrooms on the floor, say 1,000 sq. ft., gets the same fuel as a man who grows 4,000 sq. ft. in trays, but with the same floor area.

The Secretary : We get the same problem cropping up all the time.

Mr. Godfrey : If you are going to get increased allocation on the area of your beds it is not fair. The man who, at the moment, is only getting a ground crop is entitled to as much fuel as the man who grows on shelves.

Dr. R. L. Edwards : Mushroom growers are authorised by the Ministry to receive fuel at the same rate as glasshouse growers, i.e. 180 tons per acre of floor area. This is based on the heat requirements in glasshouses, which are extremely badly insulated, and is a liberal allowance for reasonably insulated mushroom houses. Any attempt to alter this basis because mushroom houses with shelves may contain a greater bed area than their floor area would introduce

hopeless confusion and might quite well lead to a reduction in the general allowance for mushroom growing which would be detrimental to a large proportion of growers. The standard allowance can be obtained by application to the County Horticultural Officer of the N.A.A.S. quoting the Ministry's ruling that mushroom houses are entitled to the same allowance as glasshouses. In cases of difficulty after that, members should write to the Secretary for further help.

Area Meetings

Mr. Atkins asked whether it was the policy for 1952 to encourage Area Meetings.

The Chairman : Yes. I think we have done a lot of good work with the Area Meetings during the past year. I have not been able to attend many, but I would like to attend most of them next year and get round the country and meet you growers. Everyone seems to enjoy them.

More Members Wanted

Mr. Middlebrook : Area Meetings are good in that they hold members together, but are they doing anything to increase membership? We had over 100 at our Selby meeting, but did not get a single new member as a result of it.

Mr. A. J. Berry : Couldn't we ask for the help of sundriesmen, etc., who visit glasshouse growers?

Another popular suggestion was that when members met other growers they should ask if they were members, and if not, send their names and addresses to the Secretary, who would send them particulars of the M.G.A.

Capt. G. Tweedie : Is it possible for the Association to approach bodies like the Schemes for Retired Army Officers, who might be keen on growing mushrooms?

Mr. Hovell : We should keep on reminding growers of the good the M.G.A. has done. My mind goes back to the war when we were prevented from growing mushrooms. If we had had a strong Association then, we could have put our case to the Ministry and I have no doubt we would have been allowed to grow. Mushroom growers should realise this and should be grateful to the M.G.A. for getting them fuel and other equally important things.

Dr. Peet : Many glasshouse growers who have catch crops of mushrooms are not aware that they are eligible for membership. Couldn't the Secretary write to various secretaries, for example the Lea Valley Growers, in various counties and ask them to pass on the information about the Association?

Mr. John Atkins : Articles in the trade papers on the history and achievements of the Association would be very helpful.

Mr. Leach suggested that with the new memorandum should go a free copy of the M.G.A. Bulletin, if it could be afforded.

Worthing's Poor Support

Mr. Middlebrook : We are divided about encouraging a lot of new growers. There are some 1,000 growers in this country. We have 250 of them as members, and some of the 750 who are not members are big growers, a lot of them in the Worthing area. They say they do not need this Association. We are preparing a special leaflet to

tell them what the M.G.A. has done. Worthing is a big mushroom-growing area but they are not helping at all, with a few exceptions. About 35 members down there is not good enough. How can we get the rest in?

Mr. Hovell : It is extremely difficult. Some of them do recognise the value of the M.G.A. and pay two subscriptions, one to the M.G.A. and the other to Worthing and West Sussex N.F.U. It is rather hard to ask a man for a double subscription.

Mr. Boxall supported what Mr. Hovell had said. "Of the Worthing growers," he added, "the biggest majority grow mushrooms only in the winter. They pay a subscription to the N.F.U. of a guinea an acre whatever they grow, and apart from all the work the N.F.U. and M.G.A. have done together I think we ought to try to find another way to attract the Worthing growers. They say four guineas is a lot of money to pay when they can get the same service for one guinea.

Mr. Atkins : All the 300 odd Worthing growers benefit by the activities of the M.G.A., but only 10 per cent. of them acknowledge it by joining the Association. I am as critical as anyone could be of their attitude, but it must be realised that they have their own Mushroom Section. And it should not be overlooked that the rest of the country, which has no Mushroom Section outside the M.G.A., needs the M.G.A. much more than the Worthing and West Sussex growers, yet only 20 per cent. are members.

The Chairman : We have threshed this out for years. The only thing I feel we can do now is to ask everyone to let us have their ideas.

Tariffs

Captain Tweedie : Is anything being done about tariffs?

The Secretary : Our case for mushrooms has been prepared and is being presented at this moment by the National Farmers' Union at the negotiations which are following on the Torquay Conference.

No Food Value !

Mr. O. E. Gahm : The national press was represented at the Luncheon. If they report the remarks made by Philip Harben it would not do us much good. He failed to stress the food value which the mushroom does contain.

Dr. Edwards (asked for his observations) : The available information on the food value of the mushroom has been published in Scientific Journals and has been reproduced in the M.G.A. Bulletin. There is nothing to add to this and any use of the information, in connection with Mr. Harben's speech or otherwise, merely requires that the published data should be collected and quoted in suitable form.

It was agreed to leave this matter also with the Executive Committee, which later decided to challenge any report which might appear in the press on the alleged absence of food value.

It transpired that only the *Daily Mail* (in one brief paragraph) reported Mr. Harben's speech. It was challenged and, while making no published reference to the challenge, replied by letter thus : "So far as mushrooms are concerned I assure you I agree they are **exquisite.** I am sure you are right in saying they are full of vitamins, although I would still eat them whether they had any or not!"

Later, the Editor of this Bulletin wrote to Mr. Harben quoting reports of recent dietetic research collected at headquarters to the effect that mushrooms contain approximately 2.67% of protein and are particularly rich in vitamins, having been found to be an excellent plant source of Riboflavin and Nicotinic Acid and a good source of Pantothenic Acid. They also contain appreciable amounts of thiamin and biotin and it is now clear that folic acid, too, which is found in mushrooms, will take its place among the vitamins.

Mr. Harben's Reply

Mr. Harben came back by return of post. " It is very saddening to learn," he wrote, " that my well-intentioned eulogies of mushrooms should have caused such alarm and despondency in your ranks. But I seriously doubt whether your fears are well grounded and whether the sales of mushrooms will, as a result of any remarks of mine, drop by so much as a single fungus .....

" When I said (as I still do) that the direct food value of mushrooms is negligible, I meant it as a compliment. Surely that is the whole point? Mushrooms are eaten for pleasure alone, and that in these days is a really wonderful thing. If someone said that the lighting of the Folies Bergère Revue contained no ultra-violet rays, would the London Pavilion expect a drop in business?

" For every ounce by which your sales decrease because people learn that mushrooms have no significant food value, you should expect them to increase by a ton because the public have been reminded of their existence and the fact that they are delicious.

" In the course of my speech I suggested, by way of analogy, than a pretty girl does not wear a pretty hat to keep her head warm. Any minute now I expect a letter from the Master Hatters' Guild pointing out that the wearing of even the most frivolous hat raises the ambient temperature within 2 millimeters of the scalp by *approximately* 0.02153 degrees Centigrade.

" Seriously, though, I don't think your Committee have anything to worry about. The tiresome cranks who lie awake at night worrying whether they have eaten enough folic acid would never have the good sense to treat themselves to the unalloyed pleasure to be got from a pound of mushrooms."

Subsequently, Mr. Harben wrote :

" I think we had better get the facts clear (although facts, in scientific matters, seem to change more rapidly than one can learn them) before we argue as to what conclusion may be drawn from them.

" To begin with, the calorie value you quote from Hutchinson pre-war cannot possibly be right for **raw** mushrooms, although it might be true of, say, fried mushrooms on account of the fat.

" With regard to vitamin content, at best there is an admissible claim in favour of nicotinic acid ; no-one could really claim that their vitamin content was impressive.

" Therefore I believe that your Publicity Committee would be unwise to plug nutrient value in selling mushrooms. The argument is too frail. On the other hand, to say that mushrooms have **no** food value is mathematically incorrect though pragmatically fair. But there are people with wretched starveling minds who disapprove of a

food being eaten wholly or mainly for pleasure.

" Therefore I would now like to say, and you may freely quote me if you wish :

" The food value of mushrooms is measurable : Their pleasure-value is immense. They contain certain important known vitamins, but most important of all, that vitamin to which Science has not yet put a name—enjoyment.

" I hope this puts me right ! "

PRESS CUTTINGS

It is melancholy to have to record that the Ministry of Agriculture's noble voluntary packing and *grading schem·e* has received so little support from the industry. *Fruit Trades' Journal, 29.9.51.*

Our horticulturists have now discovered how to produce mushrooms successfully in specially prepared beds, but they have so far been unable to find any method of stimulating and maintaining the growth of those that spring up of their own accord in certain meadows. **MAJOR S. C. JARVIS in** *Country Life, 12.10.51.*

Preliminary laboratory experiments (in Southern Rhodesia) on destroying the knot *eelworm* of tobacco by means of h.f. electric currents have indicated that a very small high potential current, applied through suitable electrodes in the soil, destroyed certain pests. Indeed, within certain frequency ranges the effect was instantly lethal and little heating of the soil occurred. *Fruit Grower, 6.9.51.*

A well-known mushroom grower in Middlesex, this week, sorrowfully showed me an excellent half-pound *carton*, and wanted to know why the trade still wanted the crop sent in cumbersome chips, instead of these small containers, so ideally suited for the retailer . . . . I suppose it must join the long list of other unsolved market mysteries.

BILL SANDFORD in *Fruit Trades' Journal, 29.9.51.*

A new line of great promise is that concerned with natural and synthetic *pyrethrins*. The natural product was found to be toxic more generally to various insects than the synthetic products ; but while the synthetic product was not so active against some insects as the natural product, it was more effective against certain insects.

R. A. E. GALLEY in *Chemistry and Industry*, December, 1950 (N.A.A.S. Abstract)

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THE MUSHROOM GROWERS' ASSOCIATION

STATEMENT OF ACCOUNTS for the twelve months ended 31st AUGUST, 1951

1950	**Dr.**	£ s. d.	£ s. d.
£			
501	To Salaries and Clerical Assistance		582 12 0
175	„ Postages, Printing and Stationery		263 0 3
10	„ Cost of Reprints and Advertisements		243 10 11
4	„ Subscriptions to Trade Journals		8 14 0
23	„ Telephone, Telegrams and Sundry Expenses		57 0 8
122	„ Travelling and Hotel Expenses		146 3 1
6	„ Bank Charges and Cheque Books		8 6 0
12	„ Audit Fee		12 12 0
—	„ Rates and Insurance		2 1 1
84	„ Cost of Bulletin &c. (net)—per Contra		— — —
		£ s. d.	
64	„ Cost of Luncheon, &c.	136 5 9	
	Less Sale of Tickets	62 0 6	
			74 5 3
10	„ Other Expenses—Reception and A.G.M.		54 7 0
—	„ Maintenance and Repairs		9 13 5
30	„ Reserve for doubtful debts		— — —
25	„ Depreciation		22 17 10
			1,485 3 6
1,066			
42	„ Balance—being Excess of Income over Expenditure for the twelve months		12 12 7
			£1,497 16 1
£1,108			

			Cr.		*1950*
		£ s. d.	£ s. d.	£	£
	By Subscriptions from Ordinary Members 1950/51	1,076 19 6		*1,112*	
	Less Amount due to N.F.U.	135 19 2		*171*	
			941 0 4		*941*
	„ N.F.U. Amount waived for 1949/50		151 2 6		
	„ Subscriptions from Honorary Members 1950 51		185 12 2		*167*
	„ Sale of Advertising Space in Bulletin, Sale of Bulletins, Literature and Mushroom Science I	853 7 11		*658*	
	Add Stock of Saleable Literature 31st August, 1951	300 0 0		*200*	
		£ s. d. 1,153 7 11		*858*	
	„ *Less* Stock—1st Sept., 1950	200 0 0		*180*	
	„ „ Cost of Bulletin	594 5 10			
	„ „ Cost of Mushroom Science I	214 19 3		*762*	
		1,009 5 1			*942*
			144 2 10		
	Other Receipts :		75 18 3		
			£1,497 16 1		*£1,108*

LIABILITIES

1950		£ s. d.	£ s. d.
£			
	Subscriptions paid in advance :		
	Ordinary Members	30 9 0	
143	Honorary Members	18 16 6	
			49 5 6
38	Sundry Creditors		31 5 6
171	National Farmers' Union		135 19 2
—	Bank overdraft		14 4 0
	Income and Expenditure Account :		
	Surplus brought forward 1st September, 1950	513 10 11	
514	*Add* Surplus for the year as per Income and Expenditure Account	12 12 7	
			526 3 6
			£756 17 8
£866			

ASSETS

1950		£ s. d.	£ s. d.	*1950*
£				£
	New Office, including cost of erection and sundries		205 19 4	—
	Office Equipment as at 1st Sept., 1950	228 19 0		
	Less Depreciation	22 17 10		*229*
			206 1 2	
	Library as at 1st Sept., 1950		4 3 2	*4*
	Stock of Saleable Literature		300 0 0	*200*
	Petty Cash in hand		1 10 5	*10*
	Sundry Debtors		39 3 7	*64*
	Cash at Bank		— — —	*359*
			£756 17 8	*£866*

We have examined the foregoing accounts with the books and vouchers of the Association and certify the same to be correct in accordance therewith.

PETERBOROUGH, *6th September, 1951*,
and at London and elsewhere.

STEPHENSON, SMART & CO.,
Auditors.

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The Nursery Produce Salesmen

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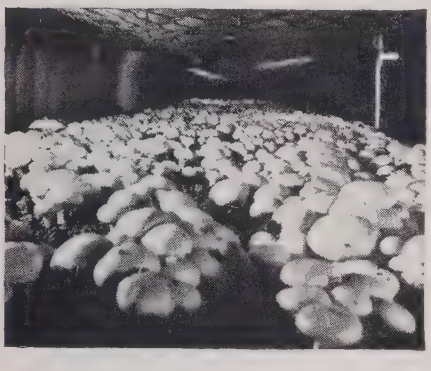

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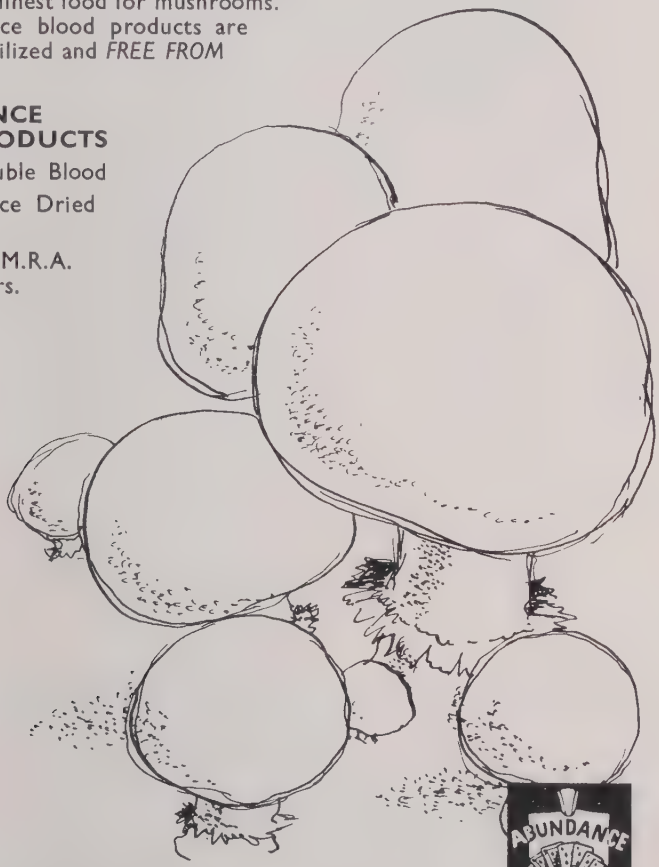

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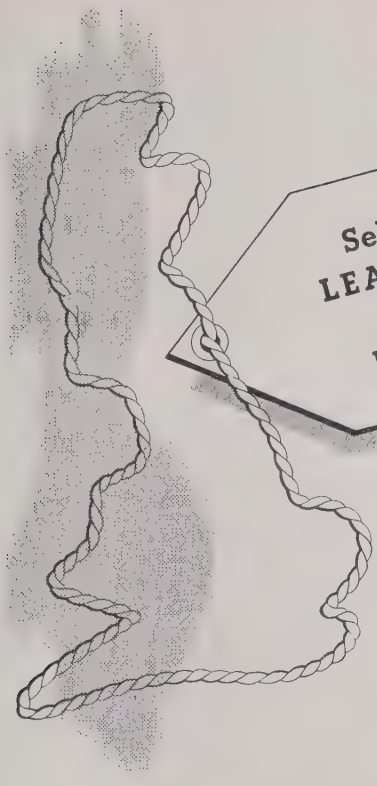

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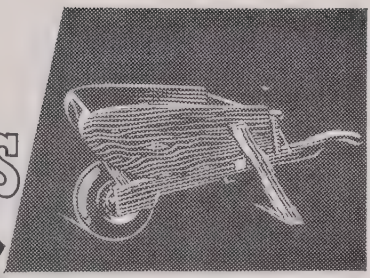

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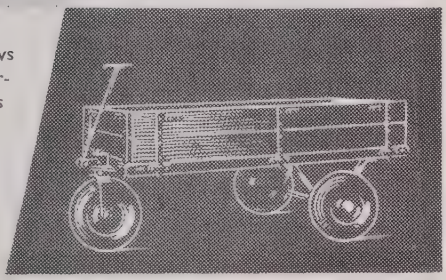

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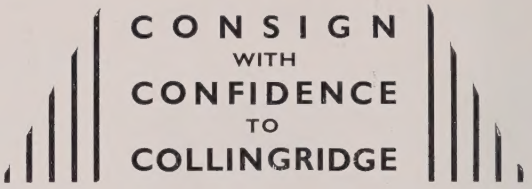

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